



Molex Incorporated
PSR 0339

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Amendment of June 4, 2008
03MO 0422USP

Claims

1. (new)

- 5 An optical connector (1) for establishing multimedia-
connections in a motor vehicle, comprising:
 a dielectric connector housing, forming a
receptacle, for mating connection with a complementary
connector, said receptacle of said dielectric housing
10 being formed by sidewalls and a rear wall of said housing,
said rear wall having openings in it,
 at least an optical connection element,
including an optical fiber section in said connector
housing, arranged in said receptacle, for mating
15 connection with a complementary optical connection element
of the complementary connector,
 at least an electro-optical component, including
electronic circuits and being arranged on a rear side of
said rear wall opposite to said receptacle, and
20 ESD protection means (30) comprising:
 at least one discharge section, projecting
towards the receptacle and having a free end, being
exposed to the interior of the receptacle, to provide an
25 ESD protection within the receptacle, and
 at least one
 electrically conductive discharge finger, penetrating
said rear wall through said opening and terminating in
said discharge section,
30 wherein said discharge section (34, 36, 38) is
arranged in the vicinity of the optical connection element

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MOST-standard
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Deleted: wherein said ESD
protection means (30)
comprises

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(1) according to Claim 1,
wherein the ESD protection
means (30) comprises an

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, in such a way that the discharge finger forms a lightning arrester for protection of the optical connection element .

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2. (new)

The optical connector according to claim 1,
also including an U-shaped shielding clamp that has at
10 least one discharge section having a front edge, wherein
said at least one discharge section of said ESD protection
means also has a front edge, all said front edges running
flush in a lateral plane that is set back with regard to
front sides of said optical fiber section.

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3. (claim 8 amended)

The optical connector according to claim 1
20 wherein the ESD protection means comprises a plurality of
discharge fingers with said discharge sections thereon.

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4. (claim 3 amended)

The optical connector according to claim 3,
wherein the free ends of the discharge sections extend
essentially parallel to the introduction direction of the
complementary connector.

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5. (claim 4 amended)

The optical connector according to claim 4,
wherein the receptacle includes a single cavity having,
5 at a front side, an opening for introducing the
complementary connector and
at said rear wall, a pair of optical connection
elements.

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5..Optical connector (1) according to one of the preceding claims,
wherein the cavity (49) is bounded by a rear wall (40b) at its rear side and the ESD protection means (30) penetrates the rear wall (40b). ¶
¶
6..Optical connector (1) according to one of the preceding claims,
wherein the ESD protection means (30) comprises an electrically conductive discharge finger (64, 66, 68) terminating in said discharge section (34, 36, 38) and the rear wall (40b). ... [1]
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6. (claim 9 amended)

15 The optical connector according to claim 5,
wherein the ESD protection means has a first and a
second discharge sections including first and second
conducting fingers extend transversely with respect to
the introduction direction of the complementary
20 connector, and a third discharge section which is arranged
between said pair of optical connection elements,
and
wherein said conducting fingers are assigned to a
pair of electro-optical components.

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7. (claim 11 amended)

The optical connector according to claim 6,
wherein the conductive fingers extend along a front side
of the pair of electro-optical components.

8. (claim 12 amended)

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first and second discharge
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discharge
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5 The optical connector according to claim 6

wherein the conductive fingers are offset transversely
with respect to the introduction direction .

10 9. (claim 13 amended)

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15 The optical connector according to claim 8

wherein the first and second conductive fingers are
formed asymmetrically.

10. (claim 14 amended)

The optical connector according to claim 5,

wherein the ESD protection means has discharge conductive fingers, each having a discharge section,

5 wherein the first optical connection element of said pair is arranged between a first and a third of the discharge sections,

10 wherein the second optical connection element of said pair is arranged between a second and the third of the discharge sections, and

15 wherein the third discharge section is arranged between the first and second optical connection elements of said pair.

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Deleted: wherein said optical connection element (94, 96) is a first optical connection element (94, 96) and the connector has at least a second optical connection element (94, 96) for mating connection with a further complementary optical connection element of the complementary connector.,

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11. (claim 15 amended)

The optical connector according to claim 10,

20 wherein the receptacle has a cavity, the cavity has at a front side an opening for introducing the complementary connector, the cavity is bounded by said rear wall at a rear side opposite to the front side, and the rear wall has at least three openings through which the respective discharge sections extend.

12. (claim 16 amended)

The optical connector according to claim 10,

30 wherein the discharge sections are stamped and formed from sheet metal at the ends of integral fingers.

13. (claim 17 amended)

5 | The optical connector, according to claim 1,
| wherein the ESD protection means has a dedicated
| connection element for connection to an electrical circuit
| board.

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14. (claim 18 amended)

15 | The optical connector, according to claim 1,
| wherein the connector has an external electrical shielding
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preceding
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15. (claim 19 amended)

5 The optical connector, according to claim 14,
wherein the external electrical shielding, penetrates the
connector housing.

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16. (claim 20 amended)

10 The optical connector, according to claim 14,
wherein the shielding, is designed in the form of an
essentially U-shaped clamp which engages around the
connector housing, rearwards.

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to the latter counter to
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connector (1), in
particular for establishing
multimedia-connections in a
motor vehicle according to
the MOST-standard and in
particular according one of
the preceding claims,
comprising:
.. a dielectric connector
housing (40) with a
receptacle (50) for mating
connection with a
complementary connector,
.. at least an optical
connection element (94, 96)
in said connector housing
(40) and for mating
connection with a
complementary optical
connection

17. (claim 21 amended)

15 The optical connector, according to claim 16,
wherein the ESD protection means, is arranged essentially
20 centrally in the U-shaped clamp.

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complementary connector,
.. at least an electro-
optical component (54, 56)
with electronic circuits
and
.. at least an electrically
conductive protection ... [7]

18. (claim 22 amended)

25 The optical connector, according to claim 16,
wherein the clamp has integrally formed press-on lugs, for
biasing the electro-optical components against the rear
wall of the housing e in the introduction direction.

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19. (claim 25 amended)

Use of a protection element, with an optical connector
designed for the MOST-standard, the optical connector
5 having a receptacle, in a connector housing, for mating
connection with a complementary connector and having
optical connection elements, which are positioned in said
receptacle, wherein said protection element is provided
in the region of the optical connection elements, and
10 comprises at least one discharge section for each optical
connection element arranged in the vicinity thereof, each
extending towards said receptacle, and having free ends
being exposed to the interior of the receptacle, thereby
preventing an electrostatic discharge from an object which
15 is introduced into said receptacle, onto said optical
connection elements, within said connector,
wherein said protection element has electrically
conductive fingers which penetrate said connector housing.

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electrostatic discharges
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protection element

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